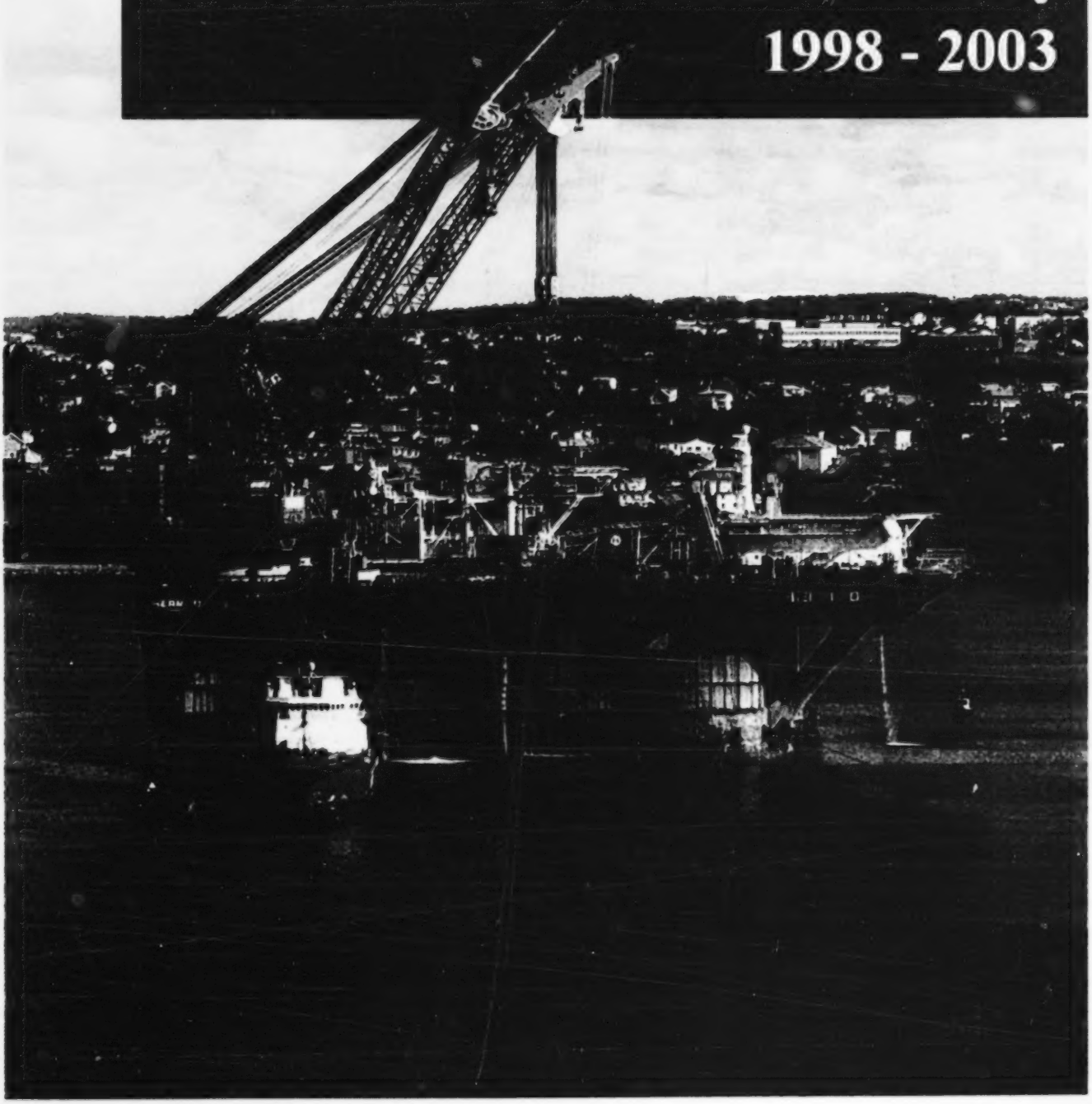
NOVA SCOTIA
Department of Finance
Economics and
Statistics Division

Overview of Nova Scotia Economy
1998 - 2003



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Cover photo – Douglas J. McCann

Hermond - a heavy lift vessel owned by Heerema Marine Contractors of the Netherlands. The vessel is capable of a tandem lift of 8,100 tonnes. Overall length = 154 metres (505 ft) and breadth = 86 metres (282 ft). Total deck load capacity = 8,000 tons. Transit speed with a 8,000 ton deck load = 6 knots at 11.5 meters (38 ft) draft. The living quarters are equipped to accommodate 336 men. All quarters have heating and air conditioning facilities.

On the deck of the *Hermond* are the components of a 2,400-tonne platform, built at the Halifax Shipyards, destined for the ExxonMobil South Venture offshore natural gas site.

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Introduction

This paper provides a brief overview of the Nova Scotia economy, including the relative contribution of each sector to the provincial Gross Domestic Product (GDP), employment, wages and salaries, and average weekly wages growth, and structural changes in employment over the mid-term period.[1] There is also some discussion on labour productivity in Nova Scotia. During the five-year period 1998-2003, the province's economy experienced a healthy growth due to the expansion in the private sector, with ten percent or more growth in mining, oil and gas extraction (due to introduction of natural gas in 1999-2000) and in administrative, support and waste management services (due to advent of call centers and recycling activities), as well as a significant growth in information and cultural services, arts, entertainment and recreation industries. Accommodation and food services (fallout from September 11, 2001 and SARS), professional, scientific and technical services (as a result of decline in Tech stocks in 2000), and the public sector (due to fiscal restraint measures) all experienced less than two percent real GDP growth during the same period.

Economic Structure

The Nova Scotia economy is predominantly service-based. The Province's services sector is proportionally larger than that of Canada. In 2003, 75.4% of the provincial economy was within the services sector, compared to 68.7% for Canada. The goods producing sector accounted for 24.6% of Nova Scotia's economy in 2003, compared to 31.3% for Canada in 2003. This represents Nova Scotia's long established position as the principal private sector service centre for Atlantic Canada and the centre for regional public administration and defence. The services sector includes a wide range of business and financial services, personal services, health and educational services, public administration, defence and other federal departments. The goods producing sector includes manufacturing, construction and primary industries.

From 1998 to 2003 the provincial economy expanded by 20.1%. The goods producing sector, in general, outperformed the services sector during this time period. While

[1] Five-year period is considered to be a mid-term period. Since the latest annual statistics is available for 2003 the 5-year period chosen for analysis is 1998-2003.

Table 1. Compound annual rate of growth in GDP and shares of provincial GDP by industry, Nova Scotia, 1998-2003.

Industry	Compound Annual Rate of Growth, 1998-2003 [%]	Share of Provincial GDP	
		1998 [%]	2003 [%]
Total	**3.7**	**100.0**	**100.0**
Goods Producing Sector	**4.8**	**23.3**	**24.6**
Primary Industries	**5.3**	**7.0**	**7.6**
Agriculture, Forestry, Fishing & Hunting	3.7	2.7	2.7
Mining & Oil and Gas Extraction	9.9	1.8	2.4
Utilities	3.4	2.6	2.5
Secondary Industries	**4.6**	**16.2**	**16.9**
Manufacturing	4.9	10.3	10.9
Construction	3.9	5.9	6.0
Services Producing Sector	**3.3**	**76.7**	**75.4**
Private Sector	**4.1**	**51.1**	**52.1**
Retail Trade	4.5	6.3	6.5
Wholesale Trade	4.6	4.7	4.9
Transportation & Warehousing	3.8	4.3	4.4
Finance, Insurance, Real Estate & Leasing (FIRE)	3.5	21.7	21.5
Professional, Scientific & Technical Services	1.7	3.0	2.8
Information & Cultural Services	6.5	3.9	4.4
Arts, Entertainment, Recreation	6.1	0.7	0.8
Accommodation & Food Services	1.3	2.8	2.5
Administrative, Support & Waste Management Services	10.9	1.4	1.9
Other Services	4.2	2.3	2.4
Public Sector	**1.7**	**25.6**	**23.3**
Educational Services	0.8	6.2	5.4
Health & Social Services	2.7	8.0	7.7
Public Administration	1.4	11.4	10.2

Source: Statistics Canada, Provincial Gross Domestic Products by Industry in Chained $1997, Catalogue No 15-203-XIB, Preliminary 2003 data released April 28, 2004.

GDP[2] in the goods producing sector grew by 26.4%, the GDP in the services sector grew by 17.6% between 1998 and 2003, mainly as a result of the contraction in the public sector's share of real GDP by 2.3 percentage points from 25.6% to 23.3% of the provincial economy (Table 1).

Over the five-year period 1998-2003, Nova Scotia's real GDP grew at a compound annual growth rate of 3.7%. The growth in the goods producing sector was above the annual growth rate of the entire Nova Scotia economy and more rapid than in the services sector, at 4.8% compared to 3.3%.

However, within the services sector the private sector compound annual growth rate was 2.4 times faster than the public sector's growth rate. As a result, the services sector's share of the provincial economy, expressed by the share of provincial GDP, declined from 76.7% in 1998 to 75.4% in 2003, while the goods producing sector's share increased from 23.3% in 1998 to 24.6% in 2003. Within the goods producing sector, the growth in primary industries was more rapid than in the secondary industries, at 5.3% and 4.6%, respectively for 1998-2003.

The fastest growing sectors in the province were mining, oil and gas extraction and administrative, support and waste management services, which grew at the compound annual rates of GDP growth of 9.9% and 10.9%, respectively between 1998 and 2003. The provincial shares of GDP for the mining, oil and gas industry increased from 1.8% in 1998 to 2.4% in 2003, and for administrative and support services from 1.4% in 1998 to 1.9% in 2003.

The growth in information and cultural services, and arts, entertainment and recreation also exceeded the compound annual growth rate for the overall Nova Scotia economy for 1998-2003, by growing at the compound annual rates of 6.5% and 6.1%, respectively between 1998 and 2003. The provincial shares of GDP for the information and cultural services sector increased from 3.9% in 1998 to 4.4% in 2003. Since the arts, entertainment and recreation sector accounts for only a small percentage of Nova Scotia's economy, the compound annual growth in GDP of 6.1% resulted in a relatively small increase in the provincial share of GDP for this sector from 0.7% in 1998 to 0.8% in 2003.

[2] In chained 1997 dollars.

Significant growth was also observed in manufacturing, wholesale trade, retail trade, other services, construction, and transportation and warehousing, which grew at compound annual rates of 4.9%, 4.6%, 4.5%, 4.2%, 3.9% and 3.8%, respectively for 1998-2003. The provincial share of GDP for manufacturing increased from 10.3% in 1998 to 10.9% in 2003, for retail trade from 6.3% in 1998 to 6.5% in 2003, and for wholesale trade from 4.7% in 1998 to 4.9% in 2003. The growth in the provincial shares of GDP for other services, construction and transportation and warehousing was 0.1 percentage points from 2.3%, 5.9% and 4.3%, respectively in 1998 to 2.4%, 6.0% and 4.4%, respectively in 2003.

By contrast, educational services, public administration and health and social services experienced growth below the annual growth rate of the Nova Scotia's economy, due to fiscal restraint, as shown by the compound annual GDP growth rates of 0.8%, 1.4% and 2.7%, respectively for 1998-2003.

The most significant decline in the provincial share of GDP was observed in the public administration sector, which declined by 1.2 percentage points from 11.4% of the total provincial GDP in 1998 to 10.2% in 2003. The provincial share of GDP for educational services and for health and social services declined by 0.8 percentage points and 0.3 percentage points, respectively in the same time period.

The growth in the professional, scientific and technical services, and accommodation and food services was relatively slow at 1.7% and 1.4%, respectively for 1998-2003. The provincial share of GDP for professional, scientific and technical services declined by 0.2 percentage points from 3.0% in 1998 to 2.8% in 2003, and for accommodation and food services by 0.3 percentage points from 2.8% in 1998 to 2.5% in 2003.

Although, the Finance, Insurance, Real Estate and Leasing (FIRE) sector and utilities experienced moderate growth in GDP, at 3.5% and 3.4% respectively, both sectors showed declines in their provincial shares of GDP by 0.2 percentage points and 0.1 percentage points, respectively for 1998-2003.

Employment

Over the five-year period 1998-2003, the total employment gain in Nova Scotia was 9.2% or 36,500 new jobs in the province. The employment growth in the province was driven primarily by large increases in a few, mainly service related, industries and a significant increase in labour participation rate from 60.7% in 1998 to 63.2% in 2003. The economic diversification of the province is reflected in where Nova Scotians are employed among the economy's industrial sectors. Distribution of employment between the goods and services producing sectors remained virtually unchanged with 77.7% jobs in the services producing sector in 2003, down by 0.2 percentage points from 1998, and 22.3% of the jobs in the goods producing sector, up by 0.2 percentage points from 1998 (Table 2).

From 1998 to 2003, the compound annual growth rate in total employment in Nova Scotia was 1.8%, with a slightly higher growth rate in the goods producing sector than in the services sector, at 2.0% and 1.7%, respectively. Since the services sector is significantly larger than the goods producing sector, the major employment gains, approximately 27,300 or 74.8% of the new jobs, were in the services sector, including 20,000 new jobs in the private sector and 7,300 new jobs in the public sector[3].

However, the structural change was observed in the services sector where the compound annual growth rate in employment in the private sector was much faster than in the public sector, at 1.9% and 1.3%, respectively for 1998-2003. As a result of this structural change, the share of the public sector employment decreased from 26.9% of total provincial employment in 1998 to 26.3% in 2003, while the share of the private sector employment increased from 51.0% in 1998 to 51.4% in 2003.

The double-digit growth in employment was observed in the administrative and support services, where approximately 10,700 new jobs were created, mainly due to the proliferation of new call centers in the province (Table 3). The compound annual growth rate in employment in this industry was 13.5% for 1998-2003. The share of total provincial employment in this category increased from 3.0% in 1998 to 5.2% in 2003.

[3] The loss of 2,200 jobs in the public administration was offset by 5,500 new jobs in health care and social assistance and 4,000 new jobs in created in educational services between 1998 and 2003.

Table 2. Compound annual growth in employment by industry and shares of total provincial employment by industry, Nova Scotia, 1998-2003.

Industry	Compound Annual Rate of Growth, 1998-2003 [%]	Share of Total Employment	
		1998 [%]	2003 [%]
Total	**1.8**	**100.0**	**100.0**
Goods Producing Sector	**2.0**	**22.1**	**22.3**
Primary Industries	**(0.9)**	**6.2**	**5.4**
Agriculture, Forestry, Fishing & Hunting	0.4	4.5	4.2
Mining, Oil and Gas Extraction	(12.3)	1.3	0.6
Utilities	8.4	0.5	0.6
Secondary Industries	**3.1**	**15.9**	**16.9**
Manufacturing	2.8	10.5	11.1
Construction	3.6	5.3	5.8
Services Producing Sector	**1.7**	**77.9**	**77.7**
Private Sector	**1.9**	**51.0**	**51.4**
Retail Trade	1.2	14.2	13.8
Wholesale Trade	2.9	3.1	3.2
Transportation & Warehousing	1.5	4.7	4.6
Finance, Insurance, Real Estate & Leasing (FIRE)	(2.7)	6.0	4.8
Professional, Scientific & Technical	2.2	4.2	4.3
Information & Cultural Services	2.4	3.9	4.0
Accommodation & Food Services	1.8	6.6	6.6
Administrative & Support Service	13.5	3.0	5.2
Other Services	(0.6)	5.4	4.8
Public Sector	**1.3**	**26.9**	**26.3**
Educational Services	2.6	7.3	7.6
Health Care & Social Assistance	2.2	12.2	12.4
Public Administration	(1.5)	7.4	6.3

Source: Statistics Canada, Labour Force Historical Review 2003, CD-ROM No. 71F0004-XCB.

Table 3. Largest increase in employment by industry, Nova Scotia, 1998-2003.

Nova Scotia Largest Increase in Employment 1998-2003	**Employment Growth [Persons]**	**Employment Growth [%]**
Administrative and Support Services	10,700	88.4
Manufacturing	6,300	15.0
Health Care and Social Assistance	5,500	11.3
Construction	4,100	19.2
Educational Services	4,000	13.7
Retail Trade	3,500	6.2

The second largest increase in employment was observed in manufacturing, with approximately 6,300 new jobs created in this industry between 1998 and 2003. The sector grew at the compound annual growth rate of 2.8% in this time period. The share of total provincial employment in this sector increased from 10.5% in 1998 to 11.1% in 2003.

The job gains in the health care and social assistance services accounted for approximately 5,500 new jobs created between 1998 and 2003. Since this sector employed 12.4% of all employed workers in the province in 2003, the share of total provincial employment in this sector increased only by 0.2 percentage points between 1998 and 2003.

Job growth in the construction sector was twice as fast as in the overall Nova Scotia labour market, at the compound annual rate of 3.6%, due to robust residential and non-residential construction activity. Approximately 4,100 new jobs were created in this industry between 1998 and 2003. The share of total provincial employment in this sector increased from 5.3% in 1998 to 5.8% in 2003.

Significant growth in employment was also observed in educational services, with 4,000 new jobs created between 1998 and 2003. The compound annual growth rate in this industry was 2.6% for 1998-2003. The share of total provincial employment in this sector increased from 7.3% in 1998 to 7.6% in 2003.

The retail trade sector, the single largest industrial category in Nova Scotia labour market, created approximately 3,500 new jobs between 1998 and 2003, despite a relatively slow compound annual growth in employment, at 1.2% for 1998–2003. The share of total provincial employment in this industry decreased from 14.2% in 1998 to 13.8% in 2003.

Other industries, that have also shown higher than the average Nova Scotia labour market compound annual growth rate, include wholesale trade, information and cultural industries, and professional, scientific and technical services. The compound annual growth rates in those industries were 2.9%, 2.4% and 2.2%, respectively for 1998-2003.

By contrast, the mining, oil and gas industry, the FIRE sector, public administration and other services experienced declines in employment, as shown by the negative compound annual rate of growth of -12.3%, -2.7%, -1.5% and -0.6%, respectively for 1998-2003.

The most significant decrease in employment was observed in the FIRE sector, where approximately 3,000 jobs were lost between 1998 and 2003, due to the consolidation of banking services with the closure of rural branches and the proliferation of ATM's. The share of total provincial employment in this sector dropped from 6.0% in 1998 to 4.8% in 2003.

The employment losses, which occurred in the mining, oil and gas extraction industries accounted for 2,400 jobs lost between 1998 and 2003. The share of total provincial employment in this sector dropped from 1.3% in 1998 to 0.6% in 2003. The decline in employment in this sector was mainly attributed to the collapse of the coal mining industry, which was partially offset by employment growth in oil and gas exploration. However, after reaching a peak in 1998 as a result of the Sable Offshore project, direct employment in the industry has declined even though exploration activities have continued. Despite the size, the industry has been one of the drivers of the provincial economy generating significant economic spin-offs. Interestingly, despite loosing jobs, this sector experienced the second fastest compound annual growth rate in GDP, at 9.9% between 1998 and 2003 (Table 1).

The employment decline in public administration accounted for 2,200 jobs lost in the public sector between 1998 and 2003, due to fiscal restraint. The share of total provincial employment in this sector dropped from 7.4% in 1998 to 6.3% in 2003. However, the loss of jobs in public administration was more than offset by 4,000 new jobs in educational services and 5,500 new jobs in health care and social assistance.

The employment losses, which occurred in other services accounted for 600 jobs lost between 1998 and 2003. The share of total provincial employment in this sector declined from 5.4% in 1998 to 4.8% in 2003.

Interestingly, the employment growth in the information and cultural services was relatively moderate, at 2.4%, compared to the GDP growth for this sector at 6.5% in 1998-2003. Despite creating only 1,900 new jobs, this sector experienced a significant growth in GDP between 1998 and 2003, which is primarily due to the impact of the telecommunication industry on GDP growth.

Labour Income

Over the five-year period 1998-2003, labour income in Nova Scotia grew at the compound annual rate of 5.5%, with a higher growth in the supplementary labour income than in the wages and salaries, at 6.9% and 5.3%, respectively (Table 4). As a result, the share of the labour income from wages and salaries decreased from 88.1% in 1998 to 87.2% in 2003, while the share of the supplementary labour income increased from 11.9% in 1998 to 12.8% in 2003.

Table 4. Components of labour income, Nova Scotia, 1998-2003.

Components of Labour Income	Compound Annual Rate of Growth, 1998-2003 [%]	Share of Industrial Aggregate	
		1998 [%]	2003 [%]
Labour Income	**5.5**	**100.0**	**100.0**
Supplementary Labour Income	6.9	11.9	12.8
Wages and Salaries	5.3	88.1	87.2

Source: Statistics Canada, Estimates of Labour Income, Catalogue No 13F0016-XPB.

In general, wages and salaries were growing faster in the services sector than in the goods producing sector, at the compound annual growth rates of 5.8% and 3.6%, respectively for 1998-2003 (Table 5). Within the services sector, the growth rates in wages and salaries were the same in both the private and public sector, at 5.8% for 1998-2003.

The fastest growth in wages and salaries was observed in federal public administration, (excluding military), health and social services, agriculture, forestry, fishing and hunting, and professional and personal services, which grew at the compound annual rates of 8.5%, 8.3%, 8.0% and 7.7%, respectively between 1998 and 2003.

Table 5. Wages and salaries by industry, Nova Scotia, 1998-2003

Industry	Compound Annual Rate of Growth, 1998-2003 [%]	Share of Industrial Aggregate	
		1998 [%]	2003 [%]
Wages and Salaries	**5.3**	**100.0**	**100.0**
Goods Producing Sector	**3.6**	**23.9**	**22.1**
Primary Industries			
Agriculture, Forestry, Fishing & Hunting	8.0	2.0	2.3
Mining & Oil and Gas Extraction	3.3	1.4	1.3
Utilities	2.6	1.2	1.0
Secondary Industries			
Manufacturing	3.3	11.9	10.8
Construction	3.0	7.4	6.7
Services Producing Sector	**5.8**	**76.1**	**77.9**
Private Sector	**5.8**	**42.6**	**43.5**
Trade	4.6	14.4	13.9
Transportation & Storage	4.8	5.4	5.3
Finance, Real Estate & Company Management	6.3	7.0	7.3
Professional & Personal Services	7.7	12.9	14.5
Information & Cultural Industries	2.5	2.9	2.5
Public Sector	**5.8**	**33.5**	**34.3**
Educational Services	3.0	9.8	8.8
Health & Social Services	8.3	10.2	11.8
Federal Public Administration	5.9	9.6	9.8
Federal Public Administration excluding Military	8.5	4.6	5.3
Military	3.3	5.0	4.5
Provincial Public Administration	5.3	2.5	2.5
Local Public Administration	5.3	1.4	1.4

Source: Statistics Canada, Estimates of Labour Income, Catalogue No 13F0016-XPB.

The other service sector which experienced growth in wages and salaries above the overall industrial aggregate's growth rate was the finance, real estate and company management sector, which grew at the compound annual growth rate of 6.3% between 1998 and 2003.

The growth rates in wages and salaries in the remaining industries were below the compound annual growth rate for the overall industrial aggregate, that is below 5.3% for 1998-2003.

The slowest growth in wages and salaries was observed in information and cultural industries, utilities, construction, manufacturing, mining and oil and gas extraction and military services, which grew at the compound annual rates of 2.5%, 2.6%, 3.0%, 3.3%, 3.3%, and 3.3%, respectively for 1998-2003. Trade and transportation and storage experienced growth rates in wages and salaries at 4.6% and 4.8%, respectively for 1998-2003.

Average Weekly Wages and Salaries

Over the five-year period 1998-2003, average weekly wages in Nova Scotia grew at the compound annual growth rate of 1.7%, with a slightly higher growth in the services sector than in the goods producing sector, at 1.8% and 1.4%, respectively (Table 6).

The fastest growth in average weekly wages was observed in transportation and warehousing, public administration, professional, scientific and technical services, and information and cultural services, which grew at the compound annual rates of 4.8%, 4.2%, 3.1% and 2.8%, respectively between 1998 and 2003.

Growth above the overall industrial aggregate's average weekly wages growth rate was also observed in finance and insurance, health care and social services, retail trade, educational services and manufacturing, at the compound annual growth rates of 2.4%, 2.4%, 2.3%, 2.2% and 2.2%, respectively for 1998-2003.

Administrative, support and waste management services, and arts, entertainment and recreation experienced growth in average weekly wages and salaries below the overall industrial aggregate's average weekly wages growth rate, and grew at the compound annual rates of 0.9% and 0.5%, respectively over the five-year period 1998-2003.

In contrast, a decrease in average weekly wages in salaries was observed in wholesale trade, which declined at the compound annual negative growth rate of –0.8% for 1998-2003.

In 2003, average weekly earnings in Nova Scotia were $597.89, as compared to $689.66 in Canada. In the goods producing sector, in general, the average weekly wages were higher than in the services sector, at $728.36 and $568.98, respectively for 2003.

The highest average weekly earnings in 2003 were observed in finance and insurance, public administration, professional, scientific and technical services and manufacturing at $823.59, $805.98, $753.00 and $729.63, respectively.

The lowest average weekly wages and salaries were in retail trade, other services and administration, support and waste management at $416.70, $434.36 and $462.10, respectively for 2003.

Table 6. Average weekly wages and salaries by industry, Nova Scotia, 1998-2003.

Industry	Compound Annual Rate of Growth, 1998-2003 [%]	Percent of Industrial Aggregate	
		1998 [%]	2003 [%]
Industrial Aggregate	**1.7**	**100.0**	**100.0**
Goods Producing Sector	**1.4**	**123.6**	**121.8**
Primary Industries	X	X	X
Agriculture, Forestry, Fishing & Hunting	X	X	X
Mining & Oil and Gas Extraction	X	X	X
Utilities	X	X	X
Secondary Industries			
Manufacturing	2.2	118.9	122.0
Construction	0.0	124.7	114.8
Services Producing Sector	**1.8**	**94.6**	**95.2**
Private Sector			
Retail Trade	2.3	67.7	69.7
Wholesale Trade	-0.8	132.6	116.8
Transportation & Warehousing	4.8	105.0	121.8
Finance & Insurance	2.4	133.4	137.7
Professional, Scientific & Technical Services	3.1	117.7	125.9
Information & Cultural Services	2.8	108.5	114.2
Arts, Entertainment, Recreation	0.5	54.5	51.2
Accommodation & Food Services	1.8	42.9	43.1
Administrative, Support & Waste Management Services	0.9	80.5	77.3
Other Services	1.9	71.9	72.6
Public Sector			
Educational Services	2.2	113.5	116.1
Health & Social Services	2.4	96.8	100.3
Public Administration	4.2	119.7	134.8

Source: Statistics Canada, Employment, Earnings & Hours, Catalogue No 72F0023-XCB and CANSIM Table 281-0027.
Note: X – Suppresed to meet the confidentiality requirements of the Statistics Act.

Capital Expenditures

Nova Scotia registered total capital expenditures of $5.4 billion in 2003, a 26.2% increase over the 1998 level. During the five-year period 1998-2003, total capital expenditures in Nova Scotia grew at the compound annual growth rate of 4.8%, with more rapid growth in the public sector, at 13.6%, than in the private sector (Table 7). As a result, the public sector share of total provincial capital expenditures increased from 10.4% in 1998 to 15.4% in 2003, while the private sector share decreased from 89.6% in 1998 to 84.6% in 2003.

Double digit growth in capital expenditures was observed in health care and social services, real estate, rental and leasing, retail trade, educational services, housing and other services, which grew at compound annual growth rates of 36.7%, 19.9%, 16.4%, 14.9%, 13.6% and 12.7%, respectively between 1998 and 2003. Since the health and social services sector accounts for only a small percentage of Nova Scotia's total capital expenditures, despite the rapid growth in investment in this sector, at the compound annual growth rate of 36.7% for 1998-2003, the provincial share of total capital expenditures for this sector increased only by 2.1 percentage points from 0.8% of the total provincial expenditures in 1998 to 2.9% in 2003.

The most significant increase in the share of the total provincial capital expenditures was observed in the housing sector, which increased by 9.2 percentage points from 18.6% of total provincial capital expenditures in 1998 to 27.8% in 2003. The provincial share of total provincial capital investment in real estate, rental and leasing sector increased by 2.4 percentage points from 2.5% in 1998 to 4.9% in 2003.

During the 1998-2003 period, the goods producing sector experienced a decline in total capital investment, mainly due to the decrease in capital expenditures in mining and oil and gas extraction sector, which showed a negative compound annual growth rate of -3.9% for 1998-2003. The provincial share of total capital expenditures in this sector declined from 25.4% in 1998 to 16.5% in 2003. At the same time, the total capital expenditures in the secondary industries: manufacturing and construction, grew at compound annual growth rates of 3.3% and 3.0%, respectively for 1998-2003.

Table 7. Total Capital Expenditures by Sector, Nova Scotia, 1998-2003.

Industry	Compound Annual Rate of Growth, 1998-2003 [%]	Share of Total Provincial Capital Expenditures	
		1998 [%]	2003 [%]
Industrial Aggregate	**4.8**	**100.0**	**100.0**
Goods Producing Sector			
Primary Industries			
Agriculture, Forestry, Fishing & Hunting	1.1	2.7	2.3
Mining & Oil and Gas Extraction	-3.9	25.4	16.5
Utilities	X	X	X
Secondary Industries	**3.2**	**9.6**	**8.9**
Manufacturing	3.3	7.8	7.3
Construction	3.0	1.8	1.7
Services Producing Sector			
Private Sector			
Retail Trade	16.4	2.3	3.9
Wholesale Trade	-5.4	2.5	1.5
Transportation & Warehousing	-7.7	7.2	3.8
Finance and Insurance,	0.0	6.9	5.5
Real Estate, Rental & Leasing	19.9	2.5	4.9
Professional, Scientific & Technical	-13.9	2.2	0.8
Management of Companies	X	X	X
Information & Cultural Services	8.5	3.8	4.6
Arts, Entertainment & Recreation	-18.3	1.0	0.3
Accommodation & Food Services	-11.1	1.1	0.5
Administrative, Support & Waste Management Services	1.6	0.4	0.4
Other Services	12.7	0.4	0.5
Housing	13.6	18.6	27.8
Public Sector	**13.6**	**10.3**	**15.4**
Educational Services	14.9	2.1	3.3
Health & Social Services	36.7	0.8	2.9
Public Administration	9.3	7.5	9.3

Source: Statistics Canada, Public and Private Investment in Canada, Catalogue No. 61-206 XPB.
Note: X – Suppresed to meet the confidentiality requirements of the Statistics Act.

The negative growth in capital expenditures was observed in arts, entertainment and recreation, professional, scientific and technical services, accommodation and food services, transportation and warehousing, mining and oil gas extraction, and wholesale trade, which experienced a negative growth in capital expenditures of –18.3%, -13.9%, -11.1%, -7.7%, -5.4% and -3.9%, respectively for 1998-2003.

Labour Productivity

Labour productivity is the ratio of real value added over hours worked. The simplest measure of labour productivity in an individual industry is ouput divided by hours worked. Productivity, as measured by output per hour worked, improves when GDP increases more rapidly than the number of hours worked. In general, productivity growth contributes to raising and maintaining the living standard of a country's residents.

Labour productivity in selected industry sectors was compared using as a proxy[4] labour productivity index (Table 8). In order to calculate a labour productivity index, an index of industry output was divided by an index of hours:

$$Q_t/Q_0 \,/\, L_t/L_0$$

where:

Q_t/Q_0 = the index of output in the current year (2003),

L_t/L_0 = the index of labour input in the current year (2003),

t = the current year (2003)

0 = the base year (1998)

The most dramatic gain in labour productivity in Nova Scotia was observed in the mining and oil and gas extraction sector, where $Q_t/Q_0 \,/\, L_t/L_0$ index equals 1.81 for the five-year period 1998-2003, reflecting robust growth in GDP, at the compound annual growth rate of 9.9%, combined with the double digit decline in employment, at the compound annual rate of -12.3%, and a decline in capital investment, at the compound annual rate of -3.9%, and moderate growth in wages and salaries at the compound annual growth rate of 3.3%.

[4] Labour productivity index is a proxy that does not take into consideration the effects of changes in the ratio of capital to labour and the ratio of intermediate purchases to labour. Only industry multifactor productivity measures relate output to the combined inputs of labour, capital, and intermediate purchases. However, because of the enormous data requirements for the measurement of capital and intermediate purchases, a very limited number of industry multifactor productivity measures have been published.

Table 8. Labour productivity index $Q_t/Q_0 : L_t/L_0$ by industry sector, Nova Scotia, 1998-2003.

Industry	Q_t/Q_0	L_t/L_0	$Q_t/Q_0 : L_t/L_0$
Industrial Aggregate	**1.20**	**1.05**	**1.14**
Goods Producing Sector	**1.26**	**1.1**	**1.15**
Primary Industries	**1.30**	**1.02**	**1.27**
Agriculture, Forestry, Fishing & Hunting	1.20	0.98	1.23
Mining & Oil and Gas Extraction	1.60	0.88	1.81
Utilities	1.18	1.47	0.81
Secondary Industries	**1.25**	**1.12**	**1.11**
Manufacturing	1.27	1.09	1.17
Construction	1.21	1.17	1.03
Services Producing Sector	**1.18**	**1.04**	**1.14**
Private Sector	**1.22**	**1.05**	**1.17**
Wholesale Trade	1.26	1.05	1.20
Retail Trade	1.25	1.03	1.22
Transportation & Warehousing	1.21	0.92	1.31
Information & Cultural Services	1.37	0.87	1.57
Finance, Insurance, Real Estate & Leasing (FIRE)	1.19	1.16	1.03
Professional, Scientific & Technical Services	1.09	0.89	1.23
Administrative, Support & Waste Management Services	1.68	1.48	1.13
Arts, Entertainment, Recreation	1.35	1.20	1.12
Accommodation & Food Services	1.06	1.02	1.04
Other Services	1.23	1.09	1.12
Public Sector	**1.09**	**1.01**	**1.08**
Educational Services	1.04	0.97	1.07
Health Care & Social Services	1.14	1.11	1.02
Public Administration	1.07	0.92	1.16
Federal Public Admin.(except military)	1.23	1.25	0.98
Defense Services	0.93	0.88	1.06
Provincial Public Administration	1.02	0.75	1.37
Local, Municipal Public Admin.	1.30	1.02	1.28

Source: Statistics Canada, CANSIM Tables 383-0010 and 379-0025.

Information and cultural industries and provincial public administration also experienced significant labour productivity growth, with Q_t/Q_0 / L_t/L_0 ratios equal to 1.57 and 1.37, respectively over the 5-year period. The labour productivity increases in information and cultural services were attributed to the rapid growth in GDP, at the compound annual growth rate of 6.5% (impact of telecommunication industry on GDP growth), coupled with moderate growth in employment, at the compound annual growth rate of 2.4%, and significant growth in the capital investment, at the compound annual growth rate of 8.5%. for 1998-2003.

The increase in the labour productivity observed in the provincial public administration was mainly due to reduction in employment (L_t/L_0 = 0.75) over the 5-year period 1998-2003, combined with the significant growth in capital expenditures, at the compound annual growth rate of 9.3%, despite slow growth in GDP, at the compound annual rate of 1.4%, over that time period.

Over the five-year period 1998-2003, a decline in labour productivity was observed in the utilities sector and in the federal public administration sector (except defence), as shown by Q_t/Q_0 / L_t/L_0 ratios <1.0 (Table 8).

The decrease in labour productivity in the utilities sector (Q_t/Q_0 / L_t/L_0 = 0.81) was attributed to stronger growth in employment than in GDP, at the compound annual growth rates of 8.4% and 3.4%, respectively for 1998-2003.